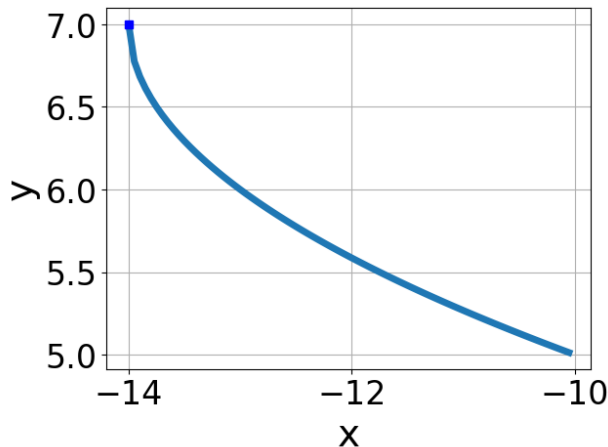1. Choose the equation of the function graphed below.

A. $f(x) = -\sqrt[3]{x+14} + 7$

B. $f(x) = \sqrt[3]{x+14} + 7$

C. $f(x) = \sqrt[3]{x-14} + 7$

D. $f(x) = -\sqrt[3]{x-14} + 7$

E. None of the above

2. What is the domain of the function below?

$$f(x) = \sqrt[8]{-7x + 3}$$

A. $(-\infty, \infty)$

B. $(-\infty, a]$, where $a \in [0, 2]$

C. $[a, \infty)$, where $a \in [1.4, 5.4]$

D. $[a, \infty)$, where $a \in [-1.9, 0.8]$

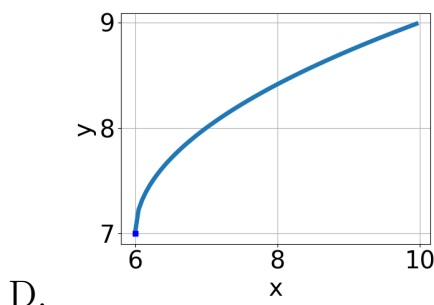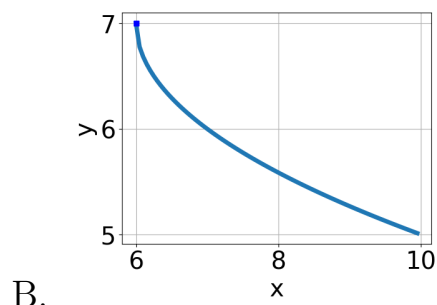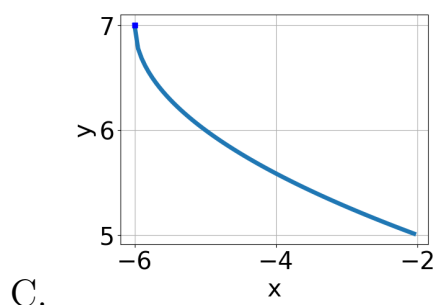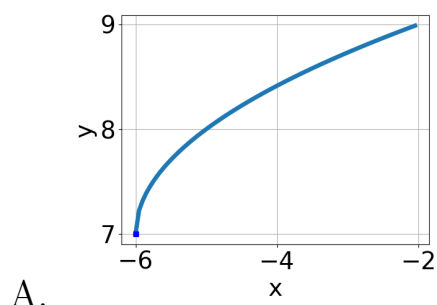E. $(-\infty, a]$, where $a \in [1.8, 4.7]$

3. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{35x^2 + 42} - \sqrt{-79x} = 0$$

A. $x_1 \in [0.72, 1.71]$ and $x_2 \in [0.9, 3.5]$

B. All solutions lead to invalid or complex values in the equation.

C. $x \in [-1.61, -0.88]$

D. $x \in [-0.88, -0.84]$

E. $x_1 \in [-1.61, -0.88]$ and $x_2 \in [-1.2, 0.3]$

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4. Choose the graph of the equation below.

$$f(x) = -\sqrt{x - 6} + 7$$

A.

B.

C.

D.

E. None of the above.

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5. What is the domain of the function below?

$$f(x) = \sqrt[4]{6x - 4}$$

A. $[a, \infty)$, where $a \in [0.51, 1.35]$

B. $[a, \infty)$, where $a \in [1.46, 1.7]$

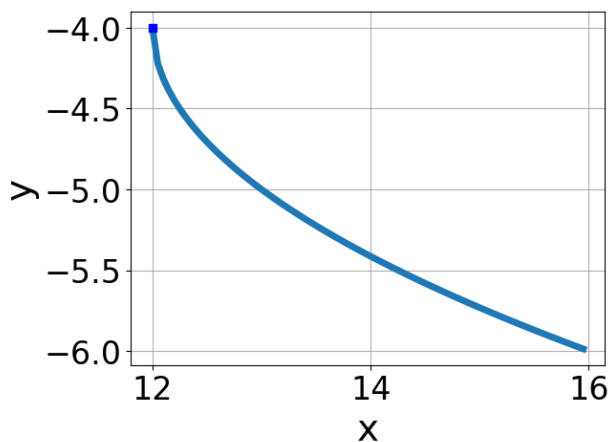C. $(-\infty, a]$, where $a \in [1.3, 4.3]$

D. $(-\infty, \infty)$

E. $(-\infty, a]$, where $a \in [0.5, 1]$

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6. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-6x - 5} - \sqrt{2x + 5} = 0$$

A. $x_1 \in [-2.6, -1.5]$ and $x_2 \in [-5.83, 1.17]$

B. $x \in [-0.7, 1.3]$

C. $x \in [-2.1, -0.4]$

D. $x_1 \in [-2.1, -0.4]$ and $x_2 \in [-5.83, 1.17]$

E. All solutions lead to invalid or complex values in the equation.

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7. Choose the equation of the function graphed below.

A. $f(x) = \sqrt{x + 12} - 4$

B. $f(x) = -\sqrt{x + 12} - 4$

C. $f(x) = \sqrt{x - 12} - 4$
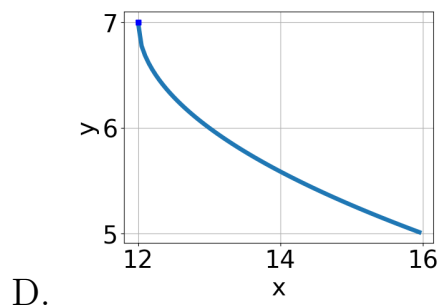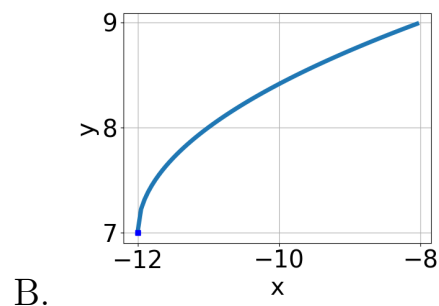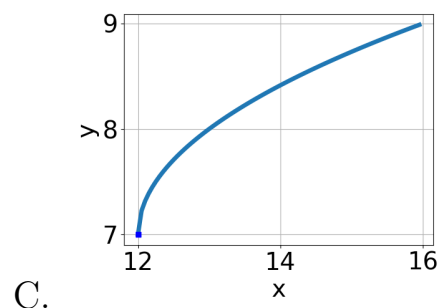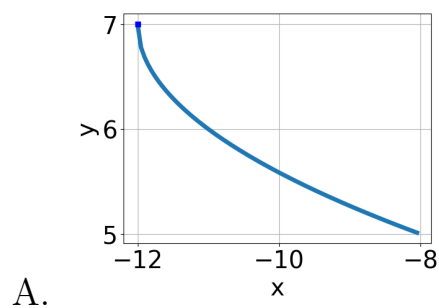
D. $f(x) = -\sqrt{x - 12} - 4$

E. None of the above

8. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-9x^2 - 24} - \sqrt{33x} = 0$$

A. $x_1 \in [2.58, 3.03]$ and $x_2 \in [-0.1, 4.2]$

B. $x \in [-2.44, -0.68]$

C. $x \in [-3.14, -2.26]$

D. $x_1 \in [-3.14, -2.26]$ and $x_2 \in [-1.4, 0.9]$

E. All solutions lead to invalid or complex values in the equation.

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9. Choose the graph of the equation below.

$$f(x) = -\sqrt{x - 12} + 7$$

A.

C.

B.

D.

E. None of the above.

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10. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{4x-6} - \sqrt{7x-4} = 0$$

A. $x_1 \in [-1.08, 0.01]$ and $x_2 \in [1.5, 3.5]$

B. $x \in [-1.08, 0.01]$

C. $x \in [-3.64, -3.28]$

D. All solutions lead to invalid or complex values in the equation.

E. $x_1 \in [-0.51, 0.84]$ and $x_2 \in [1.5, 3.5]$